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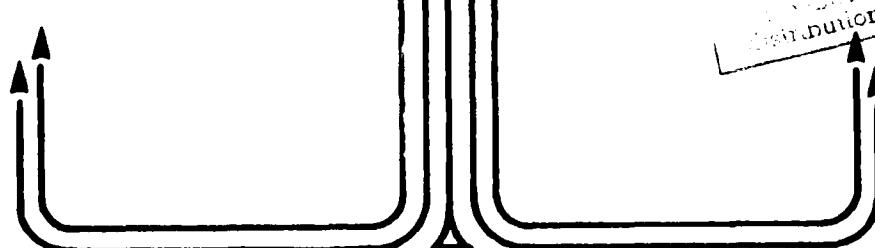


STUDENT REPORT  
A PROGRAM MANAGER'S GUIDE  
ON  
MULTIYEAR PROCUREMENT

MAJ CLINTON J. ASBURY III 86-0130

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**TITLE:** A PROGRAM MANAGER'S GUIDE  
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19. ABSTRACT (Continue on reverse if necessary and identify by block number)  Multiyear procurement (MYP) is an acquisition strategy that can stabilize weapon system procurement and reduce program costs through economic production rates. This guide is oriented toward government program managers and other system program office representatives interested in the application of MYP on their program. It explains the concept of MYP, gives a brief history, walks through an example, tracks MYP legislation, and describes the criteria for MYP approval and where it can best be applied.															
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## PREFACE

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The rising costs of defense weapon systems and the onerous national budget deficit mandate that weapons acquisition be as cost effective as possible. Multiyear procurement (MYP) is an acquisition strategy that can stabilize weapon systems procurement and lower the cost of defense weapon systems through economic production rates. In the FY 82 Authorization Act, the restrictions and approval process for the use of MYP were significantly liberalized. However, since FY 82, the attitude of Congress regarding MYP changed dramatically. Now MYP approval is very difficult to obtain due to congressionally imposed bureaucratic approval requirements. Program managers, sensing this political reversal, have shied away from MYP and are reluctant to take their program office through the rigorous MYP approval process.

The purpose of this guide is to consolidate MYP historical, administrative, and technical data and provide program managers information on the proper application of MYP. Hopefully, this will encourage program managers and other system program office representatives to again view MYP as a viable acquisition tool.

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## ABOUT THE AUTHOR

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Major Clinton J. Asbury III graduated from the USAF Academy in 1972 with a Bachelor of Science degree and major in International Affairs. This was supplemented in 1975 with a Master of Science degree in Systems Management from the University of Southern California. Following graduation from the Academy, Major Asbury's professional experience includes Missile Launch and Standardization/Evaluation Officer duty at Malmstrom AFB, Montana; AFIT Education-with-Industry Officer at the Lockheed-Georgia Company in Marietta, Georgia; Contract Negotiator and warranted Contracting Officer on the C-5A Wing Modification, F-15 Production, and classified aeronautical programs at Wright-Patterson AFB, Ohio; and Contracting Staff Officer, Executive Officer-Deputy Chief of Staff (DCS)/Contracting and Manufacturing, and Chief of the Business Management Branch for Advanced Systems-DCS/Systems, Headquarters Air Force Systems Command, Andrews AFB, Washington DC. Following Air Command and Staff College Major Asbury was assigned as the Deputy Commander of the Rockwell International B-1B bomber production facility in Columbus, Ohio. Additionally, he completed Squadron Officer School in residence in 1977, National Security Management College by correspondence in 1985, and was selected as one of the Jaycees' 1982 Outstanding Young Men of America.

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## CHAPTER 1

### INTRODUCTION

In an effort to decrease the exorbitant costs of major weapon systems, Congress approved language in the FY 82 Defense Authorization Act which allowed multiyear procurement (MYP) to be a viable acquisition tool. As a result, the Department of Defense (DoD) immediately saved approximately \$325 million by simply using MYP as the acquisition approach on selected FY 82 weapon system programs (2:118). In 1983, the Presidential Private Sector Survey by the Grace Commission advocated greater use of MYP and stated that DoD might save as much as \$3 billion over the next several years with more aggressive use of MYP (4:12). In fact, since FY 82 Air Force Systems Command (AFSC) has awarded multiyear contracts that will realize approximately \$2.8 billion in savings, but the approval and use of MYP has dramatically decreased (13:--). Because of this decrease, DoD has only experienced a fraction of the savings that could have been realized if the Grace Commission recommendations had been followed. Mrs Darleen A. Druyun, Principal Assistant to the Headquarters Air Force Systems Command Deputy Chief of Staff for Contracting (HQ AFSC/PK) believes this decrease and consequent loss of savings are directly attributable to constantly changing and more restrictive MYP legislation since FY 82 (13:--).

Believing MYP is still a viable acquisition tool, HQ AFSC/PK established a goal in its FY 86 Corporate Plan to rejuvenate the use of MYP by developing a guide for field program managers. Hopefully, by consolidating information and providing guidance on the proper application of MYP, program managers will be encouraged to look at MYP as a realistic and advantageous acquisition strategy (13:--). This guide will contribute to that goal by explaining what MYP is, giving a brief history and tracking the evolution of MYP directives, and finally describing what is necessary for MYP approval and where it can best be applied.

Chapter 2 is a basic primer on MYP. It will explain the concepts, provide key definitions, and walk the reader through a

hypothetical example of the MYP process. Chapter 3 is a brief history from MYP's initial use in the early 1960s through the legislative highs and lows of the 1980s. Chapter 3 also addresses needed changes if MYP is to again become widely used on major weapon systems programs. Chapter 4 explains the criteria for MYP program approval and the importance of the determination of estimated MYP program savings. It also discusses small MYP contracts and why they offer the greatest opportunity for MYP under current directives.

In 1983, while serving as HQ USAF Deputy Chief of Staff for Research, Development, and Acquisition, General Lawrence A. Skantze declared: "Multiyear gives us all those good things: cost savings and program stability which are essential to sustain economic production rates. Multiyear provides a stable set of procurements as opposed to stretching the procurements out and wasting taxpayer's money (3:30)." With those "good things" in mind, Chapter 2 will discuss the basics of MYP and how it works.

## CHAPTER 2

### MULTIYEAR PROCUREMENT: WHAT IS IT?

#### BACKGROUND

Multiyear procurement (MYP) is a generic term describing an acquisition situation where the Federal Government contracts, in some degree, for more than the current year's requirement (7:02). Specifically, an MYP contract is one in which DoD planned requirements, for up to a five-year period, are acquired without having total funds available at the time of contract award. Thus, an MYP contract is an alternative to a series of annual contracts in which the end items are procured one year at a time (10:02).

Implementation of an MYP contract includes distinct contractual and funding procedures that legally differ from the normal procurement. To understand MYP, the concepts underlying traditional single-year procurement and the way Congress normally funds DoD procurements must be understood. Annual funding and full funding are integral parts of the single-year process. This chapter discusses those concepts, key MYP definitions, and examines a hypothetical example from both a single-year procurement and an MYP viewpoint.

Under the concept of annual funding, Congress limits their authorizations and appropriations to one fiscal year at a time (2:114). Simply stated, they fund the procurement programs for only the upcoming fiscal year and not for out years. Annual funding is the way Congress does a preponderance of its business and should not be confused with the terms two-year, three-year, or multiyear funds. These terms obviously signify that DoD has longer than one year to obligate the funds; however, they are all still considered annual funds because they are appropriated only to meet DoD's requirements for the upcoming fiscal year. Closely coupled with the concept of annual funding is that of full funding.

Under the concept of full funding, DoD cannot award a contract for production unless it has, at the outset, all the funds available to cover the estimated cost of the end items when delivered (2:14). Full funding is required before the start of any production contract, primarily to ensure there are no hidden costs and that Congress has visibility into the total scope and cost of a program before funding it.

To recap, single-year procurement is the normal acquisition process DoD uses to acquire goods and services, including weapon systems. Single-year procurement is driven by annual funding. Since Congress only appropriates funds for one fiscal year's requirements at a time, DoD can only contract for one fiscal year's requirements at a time. DoD cannot normally do otherwise because they are bound by the concept of full funding to contract only for those complete items for which they have received congressional funding. Obviously, there are cases where it would be more economical for DoD to contract for the entire program requirement of an end item instead of buying it piecemeal over several fiscal years. However, the stringent requirements of annual funding mandate the use of single-year procurement in the absence of an exception to the normal process. MYP is that exception, allowing DoD to take advantage of General Skantze's "good things" by contracting, up front, for the requirements of up to five fiscal years (7:02).

As can be seen, contracting and MYP have a unique vocabulary. Some of the key words and terms sound very much alike, but their meanings are very different. Appendix A to this guidebook contains a list of key words and definitions. These terms were taken from Secretary of Defense Carlucci's interdepartmental memorandum, 1 May 1981, entitled "Policy Memorandum on Multiyear Procurement" (7:02). They must be completely understood if a working knowledge of MYP is to be gained.

#### EXAMPLE

To aid in the practical understanding of MYP terms, a hypothetical program outlined in Figure 1 will be examined from a single-year and multiyear viewpoint. It is important to note that in procurement jargon the 144 aircraft the Air Force is scheduled to buy in FY 85 are called the "FY 85 requirements." This is significant because it provides the basis for a number of other key procurement and MYP concepts. Initially, the single-year procurement process will be addressed under the assumption that the President's FY 85 budget contained a request

for funds to cover the estimated cost of the 144 aircraft and that Congress authorized and appropriated funds for producing those aircraft.

Since Congress appropriated funds for only a single year's aircraft requirements, this is called "annual funding". In appropriating these funds, Congress provided sufficient money to cover the total estimated cost to deliver 144 complete, militarily useable aircraft. This is known as "full funding." A test of full funding is to ask, "Does any part of this year's buy depend on a future year's appropriation for the delivery of complete units?" If the answer is yes, it is not full funding. Full funding is the policy Congress has followed for over a decade in appropriations for production contracts (not for research and development contracts).

Fiscal year (FY)	Quantity (aircraft)
85	144
86	240
87	396
88	420
89	300
Total	1500

Figure 1. Hypothetical Aircraft Acquisition Program

Since the funds are production funds the Air Force has three years to obligate them (enter into contractual agreement where the funds are used to cover the production of the 144 aircraft). Therefore they are called three-year funds or appropriations. If part or all of the funds are not obligated at the end of three years, the unobligated portion is lost to DoD and reverts back to the US Treasury. Once obligated, there is no statutory time limit for expenditure.

Returning to the example, the Air Force has now sent out Requests for Proposals for producing the 144 aircraft and awarded the contract. Since the contract covers only one year's

requirement, it is known as a "single-year" or "annual" contract.

It must be emphasized that although the Air Force might take as long as three years (until 1988) to obligate all the funds, and the first aircraft may not be delivered until two years later (1990), and the last dollar of the FY 85 appropriation may not be expended until the delivery of the last aircraft (1992), the process is still called single-year procurement. The contract is called a single-year contract, and the congressional appropriation is called annual funding--all because it relates to a single year's (FY 85) requirement.

Another aspect to understand is contract termination. Suppose that at some point before delivery of all 144 aircraft, the threat changes significantly or there is a technological breakthrough that renders the new aircraft obsolete. At any time during the life of the contract the Government, as the sovereign, has the unilateral right to end the contract. When the Government exercises that right it is called "Termination for Convenience." The Government is obligated to compensate the contractor, in accordance with provisions of the contract, for allowable expenses incurred up to the point of termination, as well as expenses involved in implementing the termination. This government obligation is called "Termination Liability."

Obviously, the single-year procurement process is an inefficient way to buy 1500 aircraft. This approach prevents any savings from economic order quantities because of the lack of contractual assurances to the contractor that there would be a subsequent year's buy. It is now time to consider the advantages of MYP.

Under the MYP strategy, Congress appropriates the funds for the FY 85 requirements, but authorizes the Air Force to award a single five-year contract for the entire 1500 aircraft program. However, this contract is contingent upon Congress separately appropriating the necessary funds for FY 86 and subsequent years. Under this arrangement the Air Force could then award a contract for the entire 1500 aircraft but initially fund only the first 144. The contractor would, however, be guaranteed a production run of 1500 aircraft versus the 144 under the single-year process. This situation would permit the contractor to make business decisions based on economies of scale. The net result would be a more efficient, stable production program with resultant cost benefits accruing to the Air Force.

At this point it is advisable to emphasize the distinction between two similar sounding terms, multiple-year funds and multiyear funding. They refer to two entirely different concepts. Multiple-year funding refers to the length of time the executive branch has to obligate appropriated funds (two- or three-year funds) and multiyear funding refers to the appropriation of funds by Congress for more than one fiscal year's requirements at one time (2:115). In this example, Congress authorized multiyear funding for 1500 aircraft but only appropriated funds for the FY 85 requirement of 144 aircraft. Although Congress has agreed contractually to fund the subsequent years, it has the right not to follow through. If Congress did not appropriate funds for a subsequent year, the contract would be cancelled and the contractor reimbursed certain unrecovered costs known as "cancellation costs."

A key distinction between MYP and single-year procurement is the definition of the terms "cancellation" and "termination." Cancellation is a term unique to MYP contracts and is effected only between fiscal years when Congress fails to appropriate funds for the subsequent FY's requirements. If this happens the MYP contract is cancelled. Termination, on the other hand, is a broader term and applies to any government contract. If the Government reduces one year's requirement (partial termination) or terminates the contract for convenience, the action is referred to as termination.

If this hypothetical Air Force MYP contract was cancelled after FY 85, the Air Force would compensate the contractor for certain unrecovered costs associated with the planned FY 86-89 quantities. The amount paid by the Government to the contractor is called the "cancellation charge." The maximum cancellation charge for any FY that the Government can pay by law, in conjunction with any one MYP contract, is known as the "cancellation ceiling." The limit and funding of the cancellation ceiling is a point of controversy in MYP legislation and will be discussed in Chapter 3.

The practical meaning of the key words in Appendix A should now be clear. Also, the concept of MYP should be understood and how it differs from the normal single-year process. Chapter 3 will discuss the history of MYP use and current legislative and policy issues.

## CHAPTER 3

### HISTORY AND EVOLUTION OF MYP LEGISLATION

#### INITIAL USE

By stabilizing program requirements and reducing program costs through economic quantity buys, MYP can assist in easing the budget deficit while maintaining our national defense. Yet, MYP's political favor has been on a roller coaster ride since its inception. This chapter briefly reviews the history of multiyear since the 1960s, discusses its political rise and fall in the 1980s, and suggests legislative changes that will put MYP back in the mainstream of major weapon systems acquisition.

The US Army began testing the concept of MYP on small motors in the early 1960s (5:45). From this testing, DoD determined MYP was particularly applicable in procurement of supplies and services where contractors often showed reluctance to pursue a contract award only to face cancellation after one year of performance. By awarding these contracts on a multiyear basis, DoD hoped to increase competition, lower costs and improve quality (5:45). Despite some minor legislative restrictions, DoD actively used multiyear for weapon systems acquisition throughout the 1960s. During this period, weapons programs were typically funded with no-year (no two- or three-year obligation requirement) funds and it did not take any special authorization to award contracts on a multiyear basis (5:46). DoD enjoyed much success with MYP, documenting substantial savings and achieving a high degree of program stability. In fact, a 1965 Logistics Management Institute study examined the 42 multiyear contracts issued for major systems prior to 1965 and found none had been cancelled (5:46). Unfortunately, this honeymoon was not to continue.

In 1972, the Navy cancelled a pair of shipbuilding contracts incurring cancellation charges of \$388 million (5:46). While the problems with these particular contracts were not

necessarily related to the fact they were multiyear, Congress, nonetheless, was not pleased with such a large unfunded liability. To prevent a recurrence of these unexpected cancellation payments on multiyear contracts, Congress established a maximum cancellation ceiling of \$5 million in the FY 73 Defense Authorization Act (5:47). As might be expected, contractors refused to accept multiyear contracts for major systems acquisitions with only a \$5 million cancellation ceiling. If a major program were cancelled after the first year, the contractor would face significant unrecovered costs yet be able to recoup only \$5 million.

For the remainder of the 1970s, the effect of the \$5 million cancellation ceiling limitation was to virtually eliminate the use of MYP on major systems acquisition. In 1980, a budget conscious Congress began to search for ways to curb the exorbitant costs of defense weapon systems. A Defense Science Board (DSB) study rekindled interest in MYP by estimating that DoD could save 10 to 15 percent of program costs by using MYP on major programs (5:42). DoD got solidly behind the DSB position and Deputy Secretary of Defense Frank Carlucci adopted the expanded use of MYP as one of his "Carlucci Initiatives" (1:05). What was needed then was legislation that would allow MYP to be a viable acquisition strategy.

#### REVIVAL OF MYP

Since 1973, Congress had refused to commit present and future congresses either to funding MYP in the out-years or to funding the associated cancellation ceilings. In addition, defense contractors refused to accept the risks associated with major weapon system MYP contracts due to the congressionally imposed \$5 million cancellation ceiling. Now, in 1981, all had changed. Congress wanted to cut the costs and stabilize the acquisition of weapon systems and was in the mood to revitalize MYP.

After much debate, Congress passed legislation in the FY 82 Authorization Bill, Public Law 97-86, 1 December 1981, that gave MYP viability in major weapon systems acquisition. Specifically, the new language authorized:

1. Cancellation ceilings up to \$100 million (only \$5 million before) without notifying Congress. Required 30 days notice for contracts with ceilings above \$100 million. The law also allowed ceilings to be either funded, or unfunded and carried as a contingent liability.

2. Use of MYP with annual funds for supplies and services in the continental United States.

3. Broadened coverage of the cancellation ceiling to include recurring costs (costs of out-year components, parts, and work in process) as well as previously allowed nonrecurring costs (costs for start-up and production) and economic lot buys.

4. Advanced buys, both in the case of long lead time items and economic order quantities, for more than one year beyond the current year's requirements.

5. MYP contracts to cover up to a five year period (2:118).

With the basic statutory impediments removed, MYP was now viable.

In FY 82, the Air Force proposed four multiyear candidates and Congress approved three. These programs produced immediate results with estimated budget savings of \$325 million over single-year procurement (2:118). On these programs contractors and subcontractors across the country could feel more confident their program was stable. They could now make the necessary long-range business decisions that would increase productivity and lower costs. However, even with this broad legislative language, DoD required the entire cancellation ceiling to be fully funded under the program's Total Obligation Authority (TOA). This policy put a severe damper on MYP use since program funding is always in short supply. To remedy the situation, DoD finally agreed to set aside a separate TOA amount to cover MYP program cancellation ceilings (1:09). Unfortunately, the foreboding implications of the nation's growing budget deficit began to raise their ugly heads. Congress was forced to address the old concerns of mortgaging future congresses with the responsibility to fund MYP programs and the lack of out-year budget flexibility associated with MYP.

#### RETRENCHMENT

Almost as quickly as the ink was dry on the FY 82 MYP approvals, congressional support for MYP started to wane. In FY 83 only two Air Force programs were approved for MYP contracts (12:--). Language in the FY83 Appropriations Bill established significant constraints on the use of MYP. The bill required:

1. Advanced congressional notification of all MYP programs with cancellation ceilings over \$20 million (significant departure from \$100 million FY 82 limit).

2. Congressional notification of all economic order quantity (EOQ) purchases (1:09).

The requirement to notify all four Defense Budget committees put a severe damper on program nomination from the field product divisions. Program offices were not willing to go through the "bureaucratic gauntlet" for MYP approval. The FY 83 action prompted then Brigadier General Bernard Weiss, HQ USAF Deputy Chief of Staff for Contracting and Manufacturing Policy, to submit the following statement to the House Appropriation Committee:

The experiences with our on-going multiyear contracts clearly demonstrate the benefits of multiyear and show a wise use of the expanded authority Congress provided during the FY 82 budget process. The expanded authority permitted the services latitude in awarding multiyear contracts. Specifically, congressional review was only required for DSARC designated programs or those with a cancellation ceiling exceeding \$100 million....This requirement for congressional review places unnecessary restrictions on the use of multiyear procurement and is contrary to the intent of the original legislation to expand multiyear authority. By dramatically curtailing this authority, program managers are discouraged from employing the techniques of economic order quantity buys and unfunded contingent liabilities which are essential to achieve major savings from multiyear....Congressional involvement should only be required for the larger multi-year candidates (11:730).

Despite General Weiss' statement to Congress, FY 84 legislation further inhibited the use of MYP. The FY 84 Defense Appropriations Act prohibited the use of FY 84 funds to initiate any weapon system multiyear contract unless the multiyear contract was specifically approved in the act. This language foreclosed any opportunity for out-of-budget-cycle programs to be selected for multiyear procurements. The act also required notification of the four congressional Defense Budget oversight committees before award of a multiyear contract that contained EOQ buys in excess of \$20 million (11:730). This was a slight relaxation of the FY 83 legislation which required Congress be notified of all EOQ buys. However, another serious blow was dealt MYP when only one of six FY 84 Air Force candidate programs was approved for MYP and one other program was approved for EOQ buys (12:--). This apparent lack of overall support led the Air Force field product divisions to read this as the death knell for MYP. When the FY 85 defense budget Program Objective Memorandum (POM) Call went out, the field did not submit any MYP program candidates. After some high level attention, several

programs were reluctantly submitted. Two follow-on MYP contracts were eventually given MYP go-ahead for FY 85. As the FY 86 POM submission unfolded, it was apparent the field was still not interested in MYP (12:--). However, the FY 87 POM process saw an improvement from AFSC product divisions, in that five MYP candidate programs were submitted. Yet, only one program was approved by DoD and forwarded to Congress for review (14:--). The FY 88 POM Call is now in process, and it appears that the AFSC command-level concern has prompted renewed MYP interest in the field. However, it is still apparent that program managers are reluctant to saddle their programs with the substantial MYP justification requirements when the use of MYP has obviously lost political favor (13:--). With the national budget deficit in mind, hard decisions are going to have to be made by Congress and DoD. Legislative changes must be enacted that will again allow MYP to strengthen our national defense and decrease the budget deficit through program savings.

#### NEEDED CHANGES

The lack of voluntary support from program managers for FY 86-88 MYP program nominations clearly indicated that the congressionally imposed hurdles to multiyear approval have had a significant impact on program managers' willingness to pursue MYP as an acquisition strategy. If this negative trend is to be reversed, changes must be made in existing MYP legislation. Mrs Druyun, HQ AFSC/PK, has offered four proposed changes that would stimulate the use of MYP (13:--). These necessary changes entail shortening the two year approval process, dropping the requirement for additional congressional review when estimated savings vary from initial estimates, increasing the EOQ notification threshold from \$20 million to \$100 million, and discontinuing the legislation that requires full funding of cancellation ceilings.

Currently, potential multiyear programs must be identified and rough cost estimates developed for inclusion in the two-year DoD Program Planning and Budgeting System budget cycle. This forces System Program Offices (SPO) and contractors to develop rough estimates of single-year and multiyear contracts two years before they are negotiated. A couple of problems result from this approach. The first is that program costs and estimated multiyear savings, even though they are rough order of magnitude numbers, become cast in concrete. As the program matures, deviations from the original estimates are inevitable. However, when these deviations occur, they must be explained and justified through the entire budget process. This causes a tremendous and unnecessary workload for SPO and contractor

personnel during normal program maturation. The second problem is with the two-year approval process. Requiring MYP programs to be included in the normal two-year budget process does not allow for out-of-cycle program approval. On some programs, the risk is too high for contractors to estimate the cost of an entire production program two years before it will begin. Contractors are therefore reluctant to propose at all or, if they do, the MYP costs are not competitive. If out-of-budget-cycle entries were allowed, finding the necessary funding and gaining MYP authority would take an extraordinary effort by all parties. However, more programs would have the opportunity to use MYP, the Government would have better MYP estimates, and contractors would be more confident in their ability to meet those estimates.

The second proposed area for change is the requirement for additional congressional review when validated MYP savings are lower than the initial estimate. Again, this requirement causes a tremendous burden on affected SPO and contractor personnel. A threshold should be established that would trigger congressional review, so it would not be required for minimal downward changes.

Increasing the EOQ \$20 million congressional notification threshold is the third area requiring revision. If MYP is to again be aggressively used for major programs, the \$20 million EOQ congressional notification threshold must be increased to the previous level of \$100 million. This new threshold would allow DoD to authorize more multiyear programs and force responsible management of the DoD budget. A \$100 million EOQ threshold would also substantially lessen the workload of the SPO and the shortened approval process would encourage program managers to pursue MYP.

Finally, Congress should discontinue passing annual appropriations acts that require the full funding of cancellation ceilings. Multiyear programs should not be selected unless they are stable in nature. To require cancellation ceilings to be fully funded unnecessarily ties up TOA needed for other programs. If a program is approved for multiyear, the risk of cancellation should be remote. At a time when the United States is trying to build a strong defense and simultaneously control the budget deficit, tough decisions and commitments will have to be made by DoD and Congress. Annual legislation requiring the full funding of cancellation ceilings should be discontinued and the subsequently unfenced TOA used to fund other programs and thereby lower the overall DoD TOA requirement.

Mrs Druyun's four proposed legislative changes are provocative. Realistically, for these changes to occur, the mood of Congress must return to the receptive nature prior to the FY 82 Authorization Bill. That is unlikely, unless DoD can prove, time and again, the effectiveness and inherent benefits of MYP. To do that, program managers must operate within existing MYP limitations and guidelines. Chapter 4 will discuss those guidelines and areas where program managers should focus their efforts for gaining approval to use MYP.

## CHAPTER 4

### PRACTICAL APPROACH

Thus far this guide has explained what multiyear procurement is, walked through an example, and provided a brief history of MYP use. Clearly, in the past, politics have played a large role in the acceptance and use of MYP. Because of the large national budget deficit, the political climate today is to slow down the use of MYP. Congress wants budget flexibility and does not want to mortgage future congresses with an excessive number of MYP programs. This does not mean that MYP is dead or that the "good things" MYP has to offer are no longer applicable. What it does mean is that program managers must be very selective in the choice of programs for which they seek approval to use MYP. A practical approach must be taken. Potential MYP benefits must be weighed against the required contractor and SPO effort necessary for MYP approval considering the realistic potential for MYP approval. This chapter discusses three areas program managers must fully analyze prior to seeking MYP approval for any programs under their management. Specifically, this chapter discusses statutory multiyear selection criteria, multiyear savings estimation, and the use of small multiyear contracts.

#### MULTIYEAR SELECTION CRITERIA

The process of deciding to use or not to use MYP for production programs as well as how to best tailor and structure MYP contracts requires management judgement (7:encl 2). The selection criteria as outlined by Deputy Secretary of Defense, Frank C. Carlucci, in 1981, were essentially written into law by PL 97-86 and are in effect today (14:--). On 10 October 1985, Major General Hansford T. Johnson, Chairman of the Air Staff Board, issued additional FY 88-92 Program Objective Memorandum guidance. This guidance reiterated Air Force leadership's strong support for MYP, but stipulated that new MYP candidates must be carefully scrutinized based on the following six multiyear selection criteria (8:atcl 1):

1. Benefit to the Government. A multiyear procurement should yield substantial cost avoidance or other benefits when compared to conventional annual contracting methods. MYP structures with greater risk to the Government should demonstrate increased cost avoidance or other benefits over those with lower risk. Savings can be defined as significant either in terms of dollars or percentage of total cost.
2. Stability of Requirement. The need for the item is expected to remain unchanged or vary only slightly during the contemplated contract period in terms of production rate, fiscal year phasing, and total quantities.
3. Stability of Funding. There should be a reasonable expectation that the program is likely to be funded at the required level throughout the contract period.
4. Stable Configuration. The item should be technically mature, have completed RDT&E (including development testing or equivalent) with relatively few changes in item design anticipated and underlying technology should be stable. This does not mean that changes will not occur but that the estimated cost of such changes is not anticipated to drive total costs beyond the proposed funding profile. Multiyear starts in the first procurement year are discouraged and must be carefully justified to the approving official before being pursued.
5. Degree of Cost Confidence. There should be a reasonable assurance that cost estimates for both contract costs and anticipated cost avoidance are realistic. Estimates should be based on prior cost history for the same or similar items or proven cost estimating techniques.
6. Degree of Confidence in Contractor Capability. There should be confidence that the potential contractor(s) can perform adequately, both in terms of government-furnished items (material, data, etc.) and their firm's capabilities. Potential contractors need not necessarily have previously produced the item.

The above criteria are guidelines for program managers to consider in a comparative benefit-risk analysis realizing that Secretary of the Air Force level procurement officials must eventually attest to the accuracy of the analysis. Criterion 1 must describe the benefit of MYP over single-year procurement and criteria 2 through 6 must convince approval authorities the program is sufficiently stable and understood to warrant MYP use. A critical area of evaluation for program MYP potential is savings or cost avoidance. Once a program has established technical and funding stability, to have any chance of MYP

approval, it must yield substantial MYP savings when compared to the single-year contracting method (7:encl 2). Appendix B is a copy of the approved Defense Satellite Communications System Phase III (DSCS III) multiyear procurement criteria exhibit for the FY 84-88 budget cycle.

#### MYP SAVINGS ESTIMATION

Probably the most contentious and important program analysis necessary for approval of MYP is that of estimated MYP program savings. Once program stability has been established a MYP candidate must provide the Government a substantial savings over the single-year approach. The following paragraphs will discuss how much program savings to expect, how these savings are determined, and the DoD financial decision-making tool, present value analysis.

Since FY 82, Air Force Systems Command has experienced MYP program savings ranging from 4 to 25 percent with an average savings of approximately 11 percent. The range stems from the type of MYP strategy (Classic MYP--without EOQ; or Expanded MYP--with EOQ) and the type of program (12:--). Typically, space programs have averaged MYP savings of approximately 20 percent while other MYP programs average approximately 10 percent (12:--). The contentious aspect of MYP savings is how they are determined.

On 10 May 1984, Mr John R. Quetsch, Principal Deputy Assistant Secretary of Defense (Comptroller), explained the savings estimation procedure to Congress. In a prepared statement before the House Appropriations Subcommittee, he tried to clarify the controversy over savings projections in "then year" versus "constant year" dollars and present value analysis.

He stipulated that "then year" dollars (includes inflation) is the normal way MYP savings projections are expressed. "Then year" dollars represent the impact on the entire present budget, which includes out-years, of a MYP program. The total savings figure is the sum of all adjustments, increases and decreases, in the years they will occur, which were made to the budget as a result of MYP. In other words, the use of "then year" dollars represents the total budget savings over the entire MYP program budget. When inflation is taken out of the projected savings estimate, it is said to be on a "constant" dollar basis. DoD-selected MYP candidate programs still project significant "constant" dollar

savings because of inherent EOQ and manufacturing benefits (9:08).

Mr Quetsch also explained the acid test of DoD MYP approval, present value analysis, as follows (9:08):

Present value analysis or discounting is a financial decision making tool which is frequently used to assist in capital investment decisions. It asserts that money has "time value." This value is expressed in the form of a target percentage return which is generally equivalent to the rate of return on the average investment for the firm. We use a target return of 10 percent on constant dollars in accordance with OMB Circular A-94. The estimated outlay streams for annual procurement and multiyear procurement are deflated to constant dollars and discounted at a rate of 10 percent per year. If the multiyear procurement discount outlay stream is less than the annual discounted stream, the multiyear investment has returned more than 10 percent annually plus inflation. Since this satisfies the target return, the investment is worth pursuing from a financial analysis point of view....In short, if a program passes the present value test and you (Congress) can say that you will buy the item, then you should approve authority for multiyear procurement.

The bottom line for program managers is that if your program is to be considered as a DoD MYP candidate, it must show substantial MYP savings and pass the "present value" test. Appendices C and D illustrate the financial analysis required when a program is submitted for MYP approval. The documents are copies of the actual FY 84-88 DSCS III production contract funding plan and present value analysis submitted during the normal budget cycle.

As has been stated earlier, the mood of Congress is to slow the use of MYP. With that hurdle in front of each program manager, time and effort regarding MYP must be spent in the most fertile area if the benefits of MYP are to be realized. Small multiyear contracts is that fertile area and program managers would be wise to concentrate their energies there.

### SMALL MULTIYEAR CONTRACTS

The FY 84 Appropriations Act broke MYP into three distinct contract categories--small, intermediate, and major systems (6:01). The following paragraphs discuss what a small multiyear contract is and why program managers should concentrate on this type of multiyear effort.

A small multiyear contract is defined as one that includes EOQ advanced procurement of \$20 million or less in any one year of the contract or includes an unfunded cancellation ceiling of \$20 million or less (6:01). What this means to program managers is that any program or portion of a program that meets the above definition can appreciate the benefits of MYP with much less bureaucratic oversight.

The importance of this classification lies in the FY 84 Appropriations Act. That legislation authorized entry into small multiyear contracts without prior congressional approval (6:01). In today's bureaucratic and cumbersome acquisition environment, this decentralizes and streamlines to some degree MYP approval. Under current regulations, this authority has been delegated to the product division commander. Now, for small multiyear contracts, the decision to use or not to use MYP can be based on business interests, not political ones. However, be aware that the additional up-front funding for EOQ advanced procurement is still subject to the approvals and procedures of the normal budget process. If the initial savings estimate is substantiated by contractor proposals and eventually negotiated prices, the approval process for small multiyear contracts is essentially like any other single-year contract. Congress is eventually notified by HQ USAF/RDC in a quarterly report of all such contract awards (6:atc 7).

This chapter has discussed multiyear selection criteria, MYP savings estimation, and small multiyear contracts. From a practical standpoint, program manager efforts focused in these areas should substantially improve MYP program approval rates.

## CHAPTER 5

### SUMMARY

Since 1982 the use of MYP has declined markedly because of restrictive legislative direction. Mrs Druyun believes MYP is still a viable acquisition tool if applied properly. To this end, she established a goal in the HQ AFSC/PK FY 86 Corporate Plan to rejuvenate the use of MYP in Air Force Systems Command. This guide is a primary instrument that will be used to achieve that goal.

Since MYP's initial use in the early 1960's, it has passed in and out of favor primarily for political and budgetary reasons. However, the compelling MYP benefits of cost savings, enhancement of the industrial base, and stabilized weapon systems acquisition programs have never altered. With the onerous national budget deficit, Congress has elected to slow down the use of MYP in order to maintain future budget flexibility. Still, in the contemporary high technology, volatile international environment, a strong defense must be maintained. Congress and DoD must make tough "guns vs. butter" decisions. In doing that, they must realize MYP is the optimum way to simultaneously reduce our national deficit and strengthen our national defense. Unfortunately, the actions taken by Congress since 1982 have made MYP an unattractive acquisition strategy. Program managers are unwilling to saddle their programs with the substantial MYP justification requirements.

This guide is an attempt to encourage program managers or other system program office representatives to again view MYP in a positive light. The guide has explained and organized the MYP process and also focused the use of MYP on the most productive areas under today's legislative and policy directives. Chapter 2 was a basic primer on the MYP process. Chapter 3 discussed the roller coaster legislative history of MYP and needed changes if the benefits of MYP are again to be fully realized. Chapter 4 focused on MYP program selection. Program managers must objectively evaluate their programs against the proper criteria, properly develop MYP program savings estimations, and search for

opportunities (breakout or small programs) to use small MYP contracts.

If this guide is followed program managers can effectively increase the use of MYP by selecting programs with a high probability of approval. This will save the program office time, funding, and unnecessary effort. HQ AFSC/PK is anxious to assist anyone on any program with MYP potential or to answer specific questions. Interested persons should write or call:

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## APPENDIX A

### KEY MYP DEFINITIONS

The following definitions are essential to the understanding of MYP:

- a. **Multiyear Procurement**. A generic term describing situations in which the Government contracts, to some degree, for more than the current year requirement. Examples include multiyear contracts, block buys, advanced economic order quantity (EOQ) procurement. Generally, advanced long lead time procurements in support of a single year's requirement would not be considered a multiyear procurement.
- b. **Multiyear Contract**. A contract covering more than one year's, but not in excess of five years', requirements entered into under the authority of 10 USC 2306(h). Total contract quantities and annual quantities are planned for a particular level and type of funding as displayed in the current Five Year Defense Plan. Each program year is subject to the annual budget process. At time of award, funds need only to have been appropriated for the first year. The contractor is protected against loss resulting from cancellation by contract provisions which allow reimbursement of costs included in the cancellation ceiling.
- c. **Advanced Procurement**. An exception to the full funding policy which allows procurement of long lead time items (advanced long lead procurement) or economic order quantities of items (advanced EOQ procurement) in a fiscal year in advance of that in which the related end item is to be acquired. Advanced procurements may include materials, parts, and components as well as costs associated with the further processing of those materials, parts, and components.
- d. **Block Buy**. Buying more than one year's requirement under a single year's contract. A total quantity is contracted for in the first contract year. Block buys normally must be fully funded, but can be termination liability funded with special approval from Congress.

e. Multiyear Funding. A congressional authorization to procure more than one fiscal year's requirements and the associated appropriation for each fiscal year. The term should not be confused with two-year or three-year funds which cover one fiscal year's requirement but permit the Executive Branch more than one year to obligate the funds.

f. Termination Liability. The maximum cost the Government would incur if a contract is terminated. In the case of a multiyear contract terminated before completion of the current fiscal year's deliveries, termination liability would include an amount for both current year termination charges and out-year cancellation charges.

g. Cancellation. A term unique to multiyear contracts. The unilateral right of the Government not to continue contract performance for subsequent fiscal years' requirements. Cancellation occurs only if and when the Government fails to fund the successive FY requirements under the contract. It is not the same as termination.

h. Cancellation Ceiling. Upon cancellation, the maximum amount that the Government will pay the contractor which the contractor would have recovered as a part of the unit price, had the contract been completed. The amount which is actually paid to the contractor upon settlement (which can only be equal to or less than the ceiling) is referred to as the cancellation charge.

i. Termination Liability Funding. Obligating sufficient contract funds to cover the contractor's expenditures plus termination liability but not the total cost of the completed end items.

j. Termination for Convenience. Procedure which applies to any Government contract, including multiyear contracts. As contrasted with cancellation, termination can be effected at any time during the life of the contract (cancellation is only effected between fiscal years) and can be for the total quantity or a partial quantity (whereas cancellation must be for all subsequent fiscal years' quantities).

k. Nonrecurring Costs. Those production costs which are generally incurred on a one-time basis include such costs as plant or equipment relocation; plant rearrangement; special tooling and special test equipment; preproduction engineering; initial spoilage and rework; and specialized work force training.

l. Recurring Costs. Production costs that vary with the quantity being procured such as labor and materials.

m. Annual Funding. The current congressional practice of limiting authorizations and appropriations to one fiscal year at a time. The term should not be confused with two-year or three-year funds which permit the Executive Branch more than one year to obligate the funds.

n. Full Funding. Funds are available at the time of award to cover the total estimated cost to deliver a given quantity of complete, militarily useable end items or services. Under current policy (DoD Directive 7200.4), the entire funding needs of the fiscal year production quantity must be provided unless an exception for advanced procurement has been approved. A test of full funding is to ask the question, "Does any part of this year's buy depend on a future year appropriation to result in the delivery of complete units?" If the answer is yes, the contract is probably not fully funded. The policy of full funding applies only to the procurement title of the annual appropriation act and therefore affects production contracts but not Research, Development, Test, and Evaluation (RDT&E) contracts.

o. Incremental Funding. Funds are not available at the time of contract award to complete a fiscal year's quantity of end items in a finished, militarily useable form. Future year appropriations are required in order to complete the items or tasks. Incremental funding is commonly used for RDT&E programs.

## APPENDIX B

8 8 FEB 1984

### MULTIYEAR PROCUREMENT CRITERIA\*

#### DEFENSE SATELLITE COMMUNICATIONS SYSTEM PHASE III (DSCS III) SPACECRAFT PRODUCTION (FY84-88)

The Department of Defense is proposing to purchase seven DSCS III spacecraft from the General Electric Company with a multiyear procurement (MYP) contract beginning in FY84.

##### CRITERIA

Benefit to Government - A DSCS III multiyear contract is projected to save \$175.0 million (TI) or 19.8% over an annual buy at the same production rate, across five years of procurement (FY84-88).

Stability of Requirement - The DSCS III production rate was stabilized when the DEPSECDEF approved the production of DSCS III in Dec 81. A firm requirement for 12 production DSCS III spacecraft was established in 1978 by DCA to replace the current DSCS II system. There are no available alternative spacecraft to perform the DSCS mission, and the DSCS III will provide critical national communications support through the 1990s. By 1984, five DSCS III satellites will be on contract via annual buy contracting. The first production contract was awarded in Jan 82 and was preceded by an advance parts buy a year earlier. The multiyear contract is for the seven remaining spacecraft.

Stability of Funding - The current Five Year Defense Plan contains sufficient funding to support the proposed MYP program. MYP end-item quantity by year will be fully funded. The Air Force, Department of Defense, Defense Communications Agency, other Government agencies, and the Congress are committed to the DSCS III program.

Stable Configuration - In early 1976, the Air Force made a decision to develop a DSCS III to provide increased capabilities. The first Development Flight Satellite was launched in Oct 82 and has successfully completed on-orbit testing. The current production spacecraft on contract will contain improvements approved by the DEPSECDEF in Dec 81. The seven satellites contracted for by MYP will have no basic design changes from the five now on contract.

Degree of Cost Confidence - The cost estimates are based upon the current production contracts and are consistent with actual costs to date over more than two years of production experience, with anticipated economies of production included. The proposed multiyear funding and projected savings are reasonable, with a high level of confidence.

Degree of Confidence in Contractor Capability - The Air Force has a very high degree of confidence in the contractor that will produce the DSCS III spacecraft. These capabilities have been proven through the history of the DSCS III program and General Electric's commitment to space communications. Although the contractor experienced cost growth problems in the initial stages of the development contract, he has performed within negotiated costs and on schedule for the last four years.

\* Initial Submittal

MYP-1

## APPENDIX C

**CONTRACT FUNDING PLAN \*\***  
**DSCB III PRODUCTION (FY84-88)**  
**(Then Year \$ in Millions)**

<u>ANNUAL PROGRAM</u>	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>	<u>FY88</u>	<u>TOTAL</u>				
QUANTITY		2	2	2	1	7				
END ITEM		235.2	244.6	260.5	140.6	888.9				
LESS ADV PROCUREMENT		-31.3	-31.3	-30.4	-19.2	-120.6				
NET REQUEST		<u>203.7</u>	<u>213.1</u>	<u>230.1</u>	<u>121.4</u>	<u>768.3</u>				
ADVANCE PROCUREMENT	<u>63.0</u>		<u>57.6</u>			<u>120.6</u>				
(FY 85)	(31.5)					(31.5)				
(FY 86)	(31.5)					(31.5)				
(FY 87)			(38.4)			(38.4)				
(FY 88)			(19.2)			(19.2)				
TOTAL BUDGET REQUEST	<u>63.0</u>	<u>203.7</u>	<u>270.7</u>	<u>230.1</u>	<u>121.4</u>	<u>888.9</u>				
<u>MULTIYEAR PROGRAM</u>	<u>FY 84</u>	<u>FY 85</u>	<u>FY 86</u>	<u>FY 87</u>	<u>FY 88</u>	<u>TOTAL</u>				
QUANTITY		2	2	2	1	7				
END ITEM		212.8	192.2	203.1	105.0	713.1				
LESS ADV PROCUREMENT		-23.2	-70.0	-77.0	-30.7	-200.9				
NET REQUEST		<u>189.6</u>	<u>122.2</u>	<u>126.1</u>	<u>74.3</u>	<u>512.2</u>				
ADVANCE PROCUREMENT	<u>81.6</u>	<u>90.2</u>	<u>16.6</u>	<u>12.5</u>		<u>200.9</u>				
(FY 85)	(23.2)					(23.2)				
(FY 86)	(23.2)	(46.8)				(70.0)				
(FY 87)	(23.2)	(38.7)	(15.1)			(77.0)				
(FY 88)	(12.0)	(4.7)	(1.5)	(12.5)		(30.7)				
TOTAL MULTIYEAR COST	<u>81.6</u>	<u>279.8</u>	<u>158.8</u>	<u>138.6</u>	<u>74.3</u>	<u>713.1</u>				
HTP SAVINGS	-18.6	-76.1	+131.9	+91.5	+47.1	+173.0				
OUTLAYS	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>	<u>FY88</u>	<u>FY89</u>	<u>FY90</u>	<u>FY91</u>	<u>FY92</u>	<u>TOTAL</u>
ANNUAL	<u>37.6</u>	<u>48.7</u>	<u>147.3</u>	<u>203.9</u>	<u>202.3</u>	<u>154.2</u>	<u>70.8</u>	<u>19.9</u>	<u>4.0</u>	<u>888.9</u>
MULTIYEAR	<u>48.7</u>	<u>106.9</u>	<u>136.7</u>	<u>147.0</u>	<u>126.2</u>	<u>91.1</u>	<u>41.6</u>	<u>11.6</u>	<u>2.3</u>	<u>713.1</u>
SAVINGS	-11.1	-58.2	+10.6	+56.1	+76.3	+63.1	+29.2	+8.3	+1.3	+173.0
DELIVERIES										
ANNUAL						2	2	2	1	7
MULTIYEAR						2	2	2	1	7

\* Annual program funding requirements are based on an equivalent (equal quantities) program and do not correspond to any official budget estimate funding profile

\*\* Initial Submittal

HYP-4

APPENDIX D

PRESENT VALUE ANALYSIS\*  
DSCH III PRODUCTION

	<u>OUTLAYS</u>										<u>TOTAL</u>
	<u>FY84</u>	<u>FY85</u>	<u>FY86</u>	<u>FY87</u>	<u>FY88</u>	<u>FY89</u>	<u>FY90</u>	<u>FY91</u>	<u>FY92</u>		
<u>ANNUAL PROPOSAL</u>											
THEN YEAR DOLLARS	37.6	48.7	147.3	203.9	202.5	154.2	70.8	19.9	4.0	888.9	
CONSTANT DOLLARS (\$4)	37.6	45.8	130.7	171.3	161.7	117.3	51.5	13.8	2.6	732.5	
PRESENT VALUE	35.8	39.7	103.0	122.7	105.3	69.6	25.2	6.1	1.1	508.5	
<u>MULTIYEAR PROPOSAL</u>											
THEN YEAR DOLLARS	48.7	106.9	136.7	147.8	126.2	91.1	41.6	11.6	2.5	713.1	
CONSTANT DOLLARS (\$4)	48.7	100.3	121.3	124.2	100.8	69.4	30.2	8.0	1.7	604.8	
PRESENT VALUE	46.4	87.1	95.6	88.9	65.6	41.1	14.0	3.6	0.7	443.8	
<u>DIFFERENCE</u>											
THEN YEAR DOLLARS	-11.1	-58.2	10.6	56.1	76.3	63.1	29.2	8.3	1.5	173.8	
CONSTANT DOLLARS (\$4)	-11.1	-34.7	9.4	47.1	60.9	48.1	21.3	5.8	0.9	127.7	
PRESENT VALUE	-10.6	-47.4	7.4	33.8	39.7	28.3	10.4	2.5	0.4	64.7	

\* Initial Submittal

NYP-6

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